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CITY OF BOULDER ENERGY FUTURE PROJECT:

Financial Forecast Tool Quick Guide

The Financial Forecast Tool (the "FFT") builds on the city's previous and ongoing analyses related to the possible creation and operation of a local electric utility. It provides an opportunity for users to explore the interaction between various inputs and how modifications of certain inputs or assumptions impact the long-term financial feasibility of a new local utility.

Like any tool of its kind, the outputs are only as good as the inputs. Based on extensive research and expert review over the past several years, the city is confident that the assumptions and data it is inputting at this stage of evaluation are reasonable (and in many cases, conservative). It is anticipated that further refinements will be necessary as more information becomes available; nonetheless, this tool is valuable in the interim to provide forecasts of certain metrics such as city retail electric rates compared to those of other electric utilities and the projected financial health of the utility over 20 years.

This guide contains instructions that will help interested users modify assumptions in the FFT that have the greatest impact on the results.

The inputs that influence the output of the FFT include:

1) Operating Budget: Annual budget for operations and maintenance
2) Load Forecast: Forecast of energy sales and growth
3) Purchase Power Forecast: Forecast of power supply costs and sources
4) Debt Service Coverage Ratio (DSCR): Net operating income divided by the principal and interest payments on long-term debt
5) Acquisition Cost: Debt issued for the purchase of the distribution system assets

Values for each of these inputs can be varied in the tool, allowing the user to test various combinations and the impacts of each. Each input is preloaded with "high," "medium" and "low" values that can be selected.

How to Operate: Step-by-step instructions

Step 1: Open the spreadsheet called 'City of Boulder Financial Forecast Version 11.03.16 PUBLIC' and navigate to the 'Assumptions' tab.[1]

Step 2: Click "Enable Content" in the yellow task bar.

Step 3: Save a copy of the spreadsheet to your computer.

[1] This is a macro-enabled workbook. Please make sure that macros are enabled. Saved files should be saved as a macros-enabled workbook to maintain full functionality.

Step 4: Familiarize yourself with the results initially presented.

Results are displayed beginning on **Line 65**. These will change as the various assumptions are modified.

The results are presented in two ways:

1. The Net Present Value (NPV) of the **difference in the revenue requirements, or the earnings test,** collected using Xcel Energy's forecasted rate and the revenue requirement of the municipal utility. The revenue requirement of the municipal utility includes all annual expenses, along with the amount collected necessary to meet the debt service coverage level (DSCR) set in the FFT. Therefore, years that are negative are those where additional revenue is likely needed to meet the target DSCR set in the FFT.[2]
    i. **Line 68**: *Revenue Collected using PSCo's rates.* Total revenue collected for each year based on Xcel Energy's (PSCo) forecasted rates and sales as driven by the Load Forecast.
    ii. **Line 69**: *Average $/kWh.* Total revenue collected divided by sales averaged for all customer classes.
    iii. **Line 71**: *Total Revenue Requirement for the Municipal Utility*. The total amount needed to cover all expenses and debt service coverage in each year. This amount could include an additional amount of revenue needed from existing rates to cover the targeted DSCR.
    iv. **Line 72**: *Net Over (Under) Collection of Revenue Requirement*. The difference between the revenue collected and the revenue requirement for each year. In essence, the difference between revenue based on Xcel's rates and the cost to run the municipal utility.
    v. **Line 73**: *Cumulative Savings/(Losses).* Year over year savings or losses based on the earnings test. In essence, the cumulative difference between revenue based on Xcel's rates and the cost to run the municipal utility.
    vi. **Line 74**: *Debt Service Coverage Ratio Set at a Minimum with Extra Revenues Required.* The DSCR as met by definition, including any extra revenues needed to meet the minimum target set in the FFT.
    vii. **Lines 76-78**: *Net Present Value (NPV) or Savings/(Losses) over 5, 10, and 20 years*. The savings/(losses) of the difference in revenue collected and revenue requirement discounted back to present value over the corresponding time period.
2. The NPV of the **actual cash flows** over the forecast period. The FFT is intended to show the amount of cash the utility has available to use each year assuming the revenue collected using Xcel's rates[3] and after all expenses and debt payments are made. Since the rates are fixed at a certain amount, this analysis shows the actual debt service coverage ratio year to year, rather than the target DSCR set in the FFT.

[2] In these years, it is possible that the operator of the utility would use revenues from prior years to cover the difference.

[3] This cash flow analysis assumes everyone is paying the same level of rates they would pay with Xcel Energy. Under this analysis the city utility would collect significant cash reserves, however the city could decide on lower rates once financial targets are met.

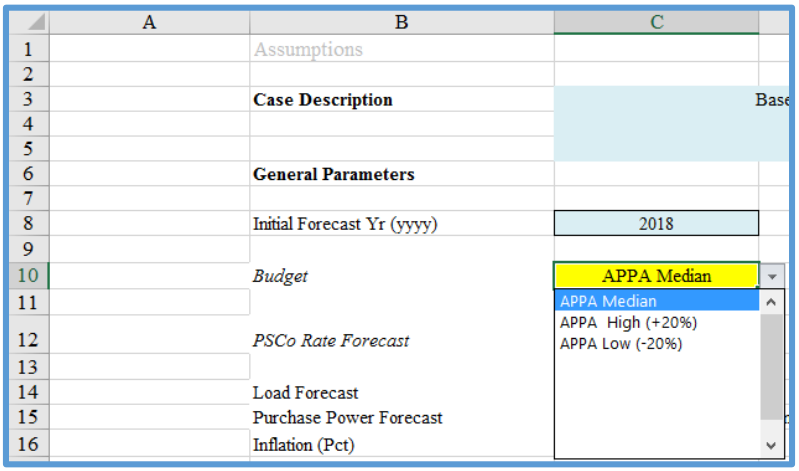
i. **Line 81:** *Net Cash Flow Before Spending and Transfers.* Actual cash available to the utility after expenses and debt payments. Includes only revenues collected using rate forecasts in FFT.
ii. **Line 82:** *Cumulative Cash Flow Available for Capital Spending, Reserves, or other purposes.* Year over year build-up of cash available to the utility for reserves, capital spending, or other purposes such as risk mitigation, rate stabilization, etc.
iii. **Line 83:** *Net Cash Flow After Working Capital (Reserves).* Assumes the excess cash is used to build the operating reserves over time to six months of operations and maintenance costs.
iv. **Line 84:** *Cumulative Cash Flow After Working Capital.* The remaining cumulative cash flow after the working capital (reserves) are built.
v. **Line 85:** *Cumulative Cash Flow After Working Capital and Capital Improvements Funded.* The remaining cumulative cash flow after reserves are built and cash funding of capital plan.
vi. **Line 86:** *Debt Service Coverage Ratio Calculated with Existing Revenues.* Actual DSCR as calculated using existing revenues in the FFT. This calculation ignores the minimum target set in the FFT, therefore the DSCR can be a less than acceptable amount in some cases.
vii. **Lines 88-90**: *Net Present Value (NPV) or Savings/(Losses) over 5, 10, and 20 years*. The NPV of the cash flows discounted back to present value over the corresponding time period.

Step 5: Locate the pre-loaded assumptions highlighted in yellow. These are inputs that are can be modified by the user.

Step 6: Modify Operating Budget, **CELL C10**: The FFT is programmed with a drop down menu of three options for the annual operation and maintenance budget. See Figure 1 below:

a. Option 1: *APPA Median.* Aligned with median benchmarks of the American Public Power Association (APPA).
b. Option 2: *APPA High.* Twenty percent higher than the median
c. Option 3: *APPA Low.* Twenty percent lower than the median.

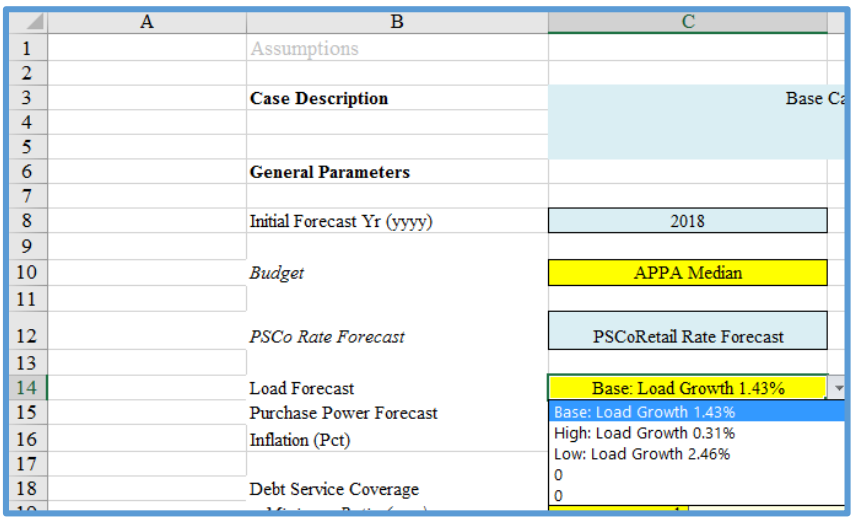
Figure 1. Operating Budget



Step 7: Modify Load Forecast, **CELL C14**: The FFT is programmed with a drop down menu of three load forecast options. See Figure 2 below:

3. Option 1. *Base Case.* Load growth at 1.43 percent
4. Option 2: *High Case.* Load growth at 0.31 percent[4]
5. Option 3: *Low Case.* Load growth at 2.46 percent

Figure 2. Load Forecast



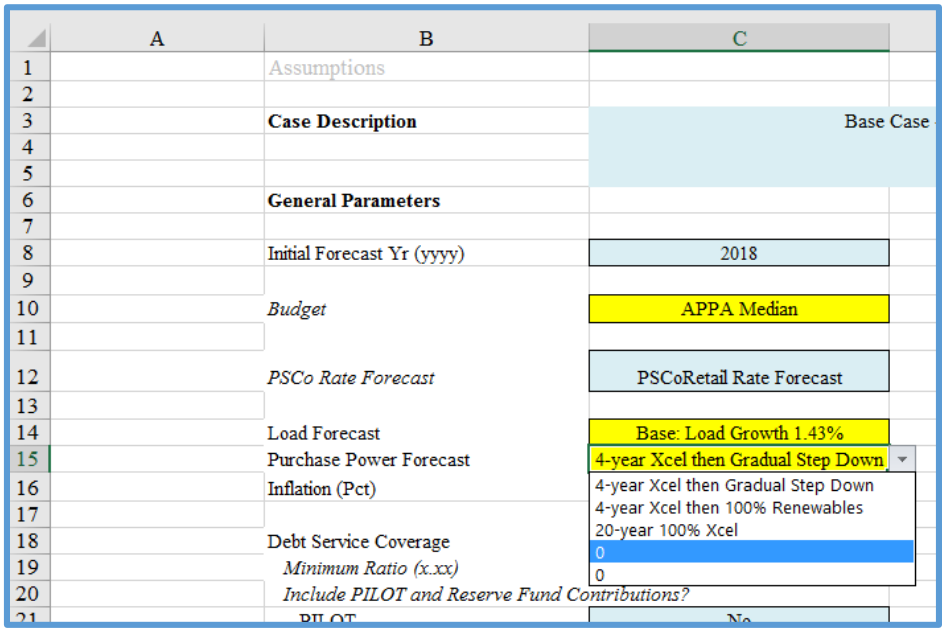
Step 8: Modify Purchase Power Forecast, **CELL C15**: The FFT is programmed with a drop down menu of three power supply purchase options. See Figure 3 below.

6. Option 1: *4-year Xcel, then a gradual step down*

[4] Higher load growth is considered in the low case because this would translate to more energy sales, which provides more revenue; this is a positive when considering a utility's financial picture. However, a city-owned utility would continue and seek to enhance energy efficiency programs, where appropriate, and switch to cleaner fuel sources as quickly as possible so that increase in energy use would not increase greenhouse gas emissions.

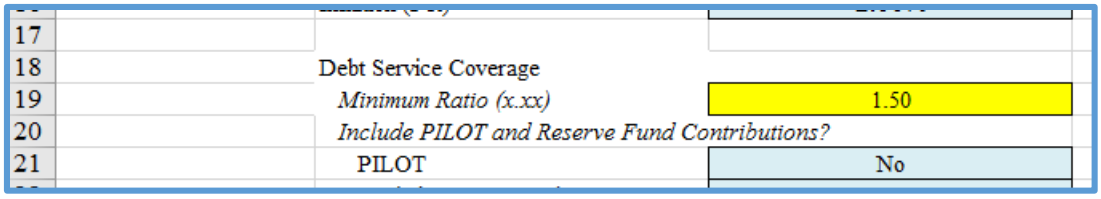
7. Option 2: *4-year Xcel, then 100 percent renewable electricity*
8. Option 3: *100 percent Xcel for 20 years*

Figure 3. Purchase Power Forecast



Step 9: Modify Debt Service Coverage Ratio (DSCR), **CELL C19**: The user can modify the DSCR minimum. The input should be in *x.xx* format, such as 1.25 or 1.50[5]. While the FFT does not solve for DSCR, meaning the DSCR will be calculated as the actual value, using the first set of analyses described on page 1, the FFT does not allow the forecast to fall below the number in this cell for any year in the 20-year forecast. See Figure 4 below.

Figure 4. Debt Service Coverage Ratio (DSCR)



Step 10: Modify Acquisition Cost, **CELL J13** and interest rate, **CELL L13**: The user can modify the amount of debt issued for the acquisition of the system. The input should be numerical, such as 150,000,000 or 214,000,000.[6] The interest rate can also be modified here. The input should be in *x.xxx* format, such as 5.500 or 4.500. See Figure 5 below.

Figure 5. Acquisition Cost and Interest Rate

[5] The FFT has a pre-loaded value of 1.50.

[6] The medium case uses $150M as the acquisition price. The City Charter limits the debt issued for acquisition at $214M.

Purpose	Fund	Date of Issue		Net Amount ($)	Amort (Years)	Interest (Pct)
		Year (yyyy)	Month (mm)			
Acquisition Cost	Capital Reserve	2018	1	150,000,000	30	5.500%
Payoff of Bridge Loan/Pre-Day 1 Costs	Capital Reserve	2018	1	14,947,926	30	4.500%
Working Capital	Working Capital	2018	1	30,165,946	30	5.500%

Step 11: Check the results.

The results are listed at the bottom of the assumptions tab, starting on Line 65 (a detailed description of each line in this section can be found starting on p. 1 of this document). Results that show positive cash flows with DSCRs staying above the charter metric (1.25) will be shown in green. Scenarios that are presented as feasible show a DSCR much higher than 2.0 and 3.0 for most years, and occasionally exceeding 4.0. Under the city's analysis, in cases where there is a year in which the DSCR goes below 1.25, the excess revenues in earlier years are more than sufficient to cover the difference.